



Figure 0.8: The proton structure function F_2^p measured in electromagnetic scattering of electrons and positrons on protons (collider experiments H1 and ZEUS for $Q^2 \geq 2 \text{ GeV}^2$), in the kinematic domain of the HERA data (see Fig. 18.10 for data at smaller x and Q^2), and for electrons (SLAC) and muons (BCDMS, E665, NMC) on a fixed target. Statistical and systematic errors added in quadrature are shown. The data are plotted as a function of Q^2 in bins of fixed x . Some points have been slightly offset in Q^2 for clarity. The H1+ZEUS combined binning in x is used in this plot; all other data are rebinned to the x values of these data. For the purpose of plotting, F_2^p has been multiplied by 2^{i_x} , where i_x is the number of the x bin, ranging from $i_x = 1$ ($x = 0.85$) to $i_x = 24$ ($x = 0.00005$).